

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

4984 P 20
Cop 3

THE AGRICULTURAL CONSERVATION PROGRAM

Facts for ACP Committeemen

United States food consumption has increased substantially. On the average, each person eats 1,650 pounds of food in a year—17 percent more than before the war.

The population of the United States has increased 13 million since 1940.

Only about 350 million acres of cropland are harvested in the United States each year, or about $2\frac{1}{2}$ acres per person.

We lose $\frac{1}{2}$ million acres of cropland a year, which is equal to the $2\frac{1}{2}$ -acre share of 200 thousand people.

Unless we stop this loss and start rebuilding our soil we cannot hope to maintain our present standard of living.

United States Department of Agriculture

Production and Marketing Administration

The Agricultural Conservation Program Provides:

1. For a national voluntary cooperative program of soil and water conservation, farmer-led and farmer-operated by elected committees.
2. That the Nation pay only a share of the costs of conservation through financial aid, materials, and services.
3. That farmers contribute their own work and a substantial share of the out-of-pocket cost to the cooperative enterprise of soil protection.
4. That the farmers' knowledge and experience be combined with technical knowledge in program planning.

The Price-Support Program Provides:

1. That prices of farm products be supported at rates fair to both farmers and consumers because of the importance of good farm prices in maintaining national prosperity.
2. That farmers, through their elected committees, play a major role in planning and operation of price-supporting programs.

Too Little Land

United States

With 145 million people, the United States harvests about 350 million acres of crops annually.

That is about $2\frac{1}{2}$ acres apiece.

By drainage, irrigation, and clearing we can add about 80 million acres.

Population will increase to about 160 millions by 1970.

Around $2\frac{1}{2}$ acres of land can still be harvested per person, *if we keep what we have* and add what we can. But—

We lose by erosion alone $\frac{1}{2}$ million acres a year.

World

For $2\frac{1}{4}$ billion people, the world has about 4 billion acres of cropland. That's $1\frac{3}{4}$ acres per person.

World population is increasing about 20 million a year. Cropland expansion can't keep pace.

The tropics offer little hope. Under cultivation, land deteriorates there with incredible speed. Temperate zones are pretty well developed.

The world is permanently and desperately short of good land. In 25 years there will be only $1\frac{1}{2}$ acres per person.

Hunger and malnutrition already claim millions of victims every year.

Crop Yields

It is not safe to let crop yields run down. The food demands of wartime and postwar were met more by increasing yields than by increasing acres.

National crop acres were increased practically not at all but average yields from 1942 to 1947 were about 13 percent higher than for the 5 years before. This was the first substantial increase in a century.

The change between these two periods is illustrated by three critical food crops. Wheat acreage decreased 8 percent but yields went up 25 percent. Corn acreage went up 1 percent but yields, in spite of the disastrous 1947 season, went up 4 percent. Potato acreage dropped 1 percent but yields increased 13 percent.

Soil conservation helped to make these bumper crops possible.

The higher yields must be maintained and increased. By 1970, to feed America well, nearly half again as much food will be required as our people ate in the 1930's. And there won't be much, if any, additional land to raise it on.

Keeping land in condition for high yields is conservation. Every step to that end is conservation, whether erosion is involved or not.

What It Takes To Keep Land Productive

On many lands, terraces, sod waterways, and dams are required to prevent erosion. When these are required they are necessary first steps. Other lands can be used safely only for the growing of grass or trees.

But on *all lands used for crops or pasture*, many other steps are required for the successful maintenance of soil fertility. Many of these steps have to be repeated, perhaps every year. And they have to be combined with others in a *system for permanent soil fertility* if needs for national production or individual farm success are to be met.

The details of systems vary greatly between areas, but there are certain essentials:

1. Land that is intensively cropped must be kept in good physical condition. If it is not, instead of soaking in, water runs off, carrying the topsoil with it. Such land gets waterlogged or puddled, is hard to work, suffers from drought, and fertilizers fail to give full results.
2. The supply of essential available minerals—lime, phosphoric acid, potash, nitrogen, particularly—must be kept adequate. Shortage of any one sharply limits yields.

Soil Condition

The principal step in keeping land in good condition is maintenance of organic matter. The higher the rainfall and temperature, the faster organic matter is used up. Plowing, fallowing, raising intertilled crops, speed up the loss of organic matter.

Each crop of corn in the Corn Belt reduces the organic matter around 2 percent. A good hay crop in the rotation adds about as much.

In the humid part of the country it is practically impossible to maintain humus content without including a hay or pasture crop regularly in the cropping system. Legumes add nitrogen as well as organic matter.

On many soils, keeping the subsoil reasonably open for the movement of water is also essential to good soil condition. Growing deep-rooted legumes is commonly the best way to open up the subsoil.

For good soil condition these are the usual requirements:

1. A proper balance between intertilled and hay or pasture crops. (Not as necessary in low rainfall areas.)
2. Winter cover crops where practical and economically sound.
3. Return to the soil of all crop residues as far as is practical.
4. Good care and use of farm manures.
5. Growing deep-rooted legumes where needed.

Essential Minerals

Six billion dollars' worth of lime, phosphorus, potash, and nitrogen is lost from the country's soils each year. That's a third as much as our crops are worth. Less than one-sixth is replaced in fertilizer . . . We are still making a living by mining our soils. . .

Lime deposits are practically inexhaustible. Nitrogen can be manufactured. Phosphorus and potash supplies are limited.

These limited supplies must be used carefully. Unnecessary losses mean higher fertilizer needs to grow crops and faster exhaustion of our supplies of these scarce materials.

Losses of minerals are from (1) Removal in crops; (2) Leaching; (3) Erosion.

On a Corn Belt farm with 150 acres in a 3-year rotation with good yields, crops alone remove annually $4\frac{1}{2}$ tons nitrogen, $5\frac{1}{2}$ tons phosphoric acid, $6\frac{1}{2}$ tons potash. It would take around 90 tons of ordinary fertilizer, costing over \$3,000, to replace this loss.

Leaching is 9 times as fast with the ground bare as with a good rotation, and 25 times as fast as with continuous grass.

How to cut mineral losses:

Prevent erosion.

Keep the ground covered with growing crops.

Develop well-balanced farming.

Store manure well or spread at once.

Use all the lime that's needed.

Use phosphorus and potash as needed for legumes and soil-protecting crops.

In this pamphlet are practical facts about soil and water conservation—

. . . Just a few facts out of many that this country needs to know to guard its future;

. . . Just a few facts out of many that every farmer needs to know to look ahead in his farming; for his own good; for the good of his country;

. . . Just a few facts out of many that every committeeman needs to present for the understanding and use of his neighbors; for the good of his fellow farmers; for the good of his country.

*The Aim of the
Agricultural Conservation Program
is*

To help and encourage farmers to make widespread use of conservation practices that stop unnecessary soil and mineral losses, maintain the quality of the soil, and make full use of available moisture.

L I B R A R Y
C U R R E N T S E A S O N 1940

AUG 10 1948